



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,663	01/16/2002	Adam E. C. Yeh	MS#183303.1 (4965)	6055
321	7590	12/13/2004	EXAMINER	
SENNIGER POWERS LEAVITT AND ROEDEL ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			ORTIZ, BELIX M	
			ART UNIT	PAPER NUMBER
			2164	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,663

Applicant(s)

YEH, ADAM E. C.

Examiner

Belix M. Ortiz

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Remarks

1. In response to communications files on 5-August-2004, the specification of the disclosure, and claims 44 and 48 are amended per applicant's request. Therefore, claims 1-60 are presently pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-11, 13-14, 18-24, 29-32, 34-36, 38-39, 43, 48-50, and 52-58 are rejected under 35 U.S.C. 102(e) as being anticipated by Shah et al. (U.S. publication 2002/0099692).

As to claim 1, Shah et al. teaches one or more computer readable media having a data structure stored thereon (see figure 11 and paragraph 96), the data structure comprising:

a general dimension containing members in a plurality of levels, the levels being organized according to a hierarchy in which descending levels in the hierarchy are defined by increasing specificity (see paragraph 6);

a summary cube containing the members of at least one upper level of the general dimension (see paragraph 22 and paragraph 64); and

a partitioned dimension containing a first subset of the members of at least one lower level of the general dimension, the lower level associated with the partitioned dimension being lower in the hierarchy than the upper level associated with the summary cube, the general dimension being partitioned based on a selected member of the upper level to form the partitioned dimension (see paragraphs 6 and 52), the first subset of the members of the lower level corresponding to the selected member of the upper level (see paragraph 53 and paragraph 91).

As to claim 2, Shah et al. teaches the data structure further comprising a detail cube including the partitioned dimension and one or more sub-cubes containing aggregations of the first subset of the members of the lower level from the partitioned dimension (see figure 3A; claim 3; page 5, paragraph 77; and page 6, paragraph 91).

As to claim 3, Shah et al. teaches wherein the detail cube comprises a first sub-cube for additive metrics and a second sub-cube for non-additive metrics (see figure 8, character “810” and page 4, paragraphs 63 and 66).

As to claim 4, Shah et al. teaches wherein the first and second sub-cubes are combined to form a virtual cube (see page 1, paragraph 22).

As to claim 5, Shah et al. teaches wherein the additive metrics include page views (see page 4, paragraph 63).

As to claim 6, Shah et al. teaches wherein the non-additive metrics include unique user counts (see figure 2 and page 5, paragraph 67).

As to claim 7, Shah et al. teaches wherein the partitioned dimension contains the members of the upper level associated with the summary cube in addition to the first subset of the members of the lower level associated with the partitioned dimension (see page 1, paragraph 6).

As to claim 8, Shah et al. teaches the data structure further comprising another partitioned dimension containing a second subset of the members of the lower level, the general dimension being partitioned based on another selected member of the upper level to form the other partitioned dimension, the second subset of the members of the lower level corresponding to the other selected member of the upper level (see page 3, paragraph 53 and page 6, paragraph 91).

As to claim 9, Shah et al. teaches wherein the data structure is modeled according to a star dimensional model schema (see figure 3B; page 1, paragraphs 6 and 12; and page 2, paragraph 25).

As to claim 10, Shah et al. teaches wherein the data structure is an OLAP database (see page 1, paragraphs 5, 7, and 22).

As to claim 11, Shah et al. teaches the data structure further comprising one or more shared dimensions (see claim 1 and page 2, paragraph 24).

As to claim 13, Shah et al. teaches wherein the members of the general dimension represent Web usage information (see figure 11, character “1892”; page 1, paragraph 8; page 6, paragraph 92 and page 7, paragraphs 95 and 96).

As to claim 14, Shah et al. teaches wherein the Web usage information is organized into two or more of the following levels: network, service, site, domain, directory, and page (see page 6, paragraph 92 and page 7, paragraphs 95 and 96).

As to claim 18, Shah et al. teaches a method of processing data in a multidimensional database (see figure 11 and paragraph 96) comprising:

defining a plurality of dimensions, each dimension containing members of a plurality of levels, the levels being organized according to a hierarchy in which descending levels in the hierarchy are defined by increasing specificity (see paragraph 6);

partitioning at least one of the dimensions based on a selected member of an upper level of the dimension to be partitioned (see paragraphs 6 and 52), the partitioned dimension containing a first subset of the members of at least one lower level of the

dimension to be partitioned (see paragraph 22; paragraph 53; paragraph 64; and paragraph 91); and

defining a summary cube containing the members of an upper level of the partitioned dimension, the upper level associated with the summary cube being higher in the hierarchy than the lower level associated with the partitioned dimension (see paragraphs 6 and 22 and paragraph 64).

As to claim 19, Shah et al. teaches the method further comprising defining a detail cube, the detail cube including the partitioned dimension and one or more sub-cubes containing aggregations of the first subset of the members of the lower level from the partitioned dimension (see figure 3; claim 3; paragraph 77; and paragraph 91).

As to claim 20, Shah et al. teaches the method further comprising combining the first and second sub-cubes to form a virtual cube (see paragraph 22).

As to claim 21, Shah et al. teaches wherein the detail cube comprises a first sub-cube for additive metrics and a second sub-cube for non-additive metrics (see figure 8, character '810' and page 4, paragraphs 63 and 66).

As to claim 22, Shah et al. teaches wherein the additive metrics include page views (see page 4, paragraph 63).

As to claim 23, Shah et al. teaches wherein the non-additive metrics include unique user counts (see figure 2 and page 5, paragraph 67).

As to claim 24, Shah et al. teaches the method further comprising extracting information from the summary and detail cubes using an OLAP application (see page 1, paragraphs 5, 7, and 22).

As to claim 29, Shah et al. teaches wherein the partitioned dimension contains the members of the upper level associated with the summary cube in addition to the first subset of the members of the lower level associated with the partitioned dimension and wherein the detail cube and the summary cube have the same dimensionality (see page 1, paragraph 6).

As to claim 30, Shah et al. teaches the method further comprising implementing zoom in, zoom out events to navigate between information in the summary cube and information in the detail cube (see figure 3A).

As to claim 31, Shah et al. teaches wherein the zoom in event comprises a drill through from the summary cube to the detail cube (see figure 3A).

As to claim 32, Shah et al. teaches wherein the zoom out event comprises a roll up from the detail cube to the summary cube (see figure 3A).

As to claim 34, Shah et al. teaches wherein the partitioned dimension contains the members of the upper level associated with the summary cube in addition to the first subset of the members of the lower level associated with the partitioned dimension (see page 1, paragraph 6).

As to claim 35, Shah et al. teaches the method further comprising partitioning another dimension based on another selected member of the upper level, the other partitioned dimension containing a second subset of the members of the lower level corresponding to the other selected member of the upper level (see page 3, paragraph 53 and page 6, paragraph 91).

As to claim 36, Shah et al. teaches wherein defining the dimensions includes modeling the data in the multidimensional database according to a star dimensional model schema (see figure 3B; page 1, paragraphs 6 and 12; and page 2, paragraph 25).

As to claim 38, Shah et al. teaches wherein the members of the dimension to be partitioned represent Web usage information (see figure 11, character “1892”; page 1, paragraph 8; page 6, paragraph 92 and page 7, paragraphs 95 and 96).

As to claim 39, Shah et al. teaches wherein the Web usage information is organized into two or more of the following levels: network, service, site, domain, directory, and page (see page 6, paragraph 92 and page 7, paragraphs 95 and 96).

As to claim 43, Shah et al. teaches one or more computer-readable media having computer-executable instructions for performing the method of claim 18 (see figure 11 and page 7, paragraph 96).

As to claim 48, Shah et al. teaches one or more computer-readable media having computer-executable components for processing data, the data being organized in a dimension containing members in a plurality of levels, the levels being organized according to a hierarchy in which descending levels in the hierarchy are defined by increasing specificity (see figure 11; page 1, paragraph 6; and page 7, paragraph 96), the components comprising:

- a summary cube database component storing the members of an upper level of the dimension (see page 1, paragraph 22 and page 4, paragraph 64);

- a partitioned dimension component: containing a subset of the members of at least one lower level of the dimension, the lower level associated with the partitioned dimension component being lower on the hierarchy than the upper level associated with the summary cube database component (see paragraph 64), the subset of the members of the lower level being partitioned from the dimension based on a selected member of the upper level (see paragraph 53), the partitioned dimension component further containing the members of the upper level associated with the summary cube database component (see page 3, paragraph 53 and page 6, paragraph 91);

- a detail cube database component including the partitioned dimension component and one or more sub-cubes containing aggregations of the subset of the members of the

lower level from the partitioned dimension component the detail cube database component and the summary cube database component having the same dimensionality (see figure 3A, character “300”; claim 3; page 5, paragraph 77; and page 6, paragraph 91); and

a navigation component for implementing zoom in/zoom out events to navigate between information in the summary cube database component and information in the detail cube database component (see figure 3A and paragraph 42).

As to claim 49, Shah et al. teaches wherein the zoom in event comprises a drill through from the summary cube database component to the detail cube database component (see figure 3A where character “125b” show the navigation from an overview map to a detail map).

As to claim 50, Shah et al. teaches wherein the zoom out event comprises a roll up from the detail cube database component to the summary cube database component (see figure 3A where character “125a” show when the user go to detail map to summary cube or overview).

As to claim 52, Shah et al. teaches a method of performing clickstream analysis from Web usage data in a multidimensional database (see figure 11 and paragraphs 3, 5, and 22), the method comprising:

defining a target dimension, the target dimension containing members of a plurality of levels (see paragraph 24), the levels including a service level containing members representative of a plurality of Web services (see paragraph 96), the levels being organized according to a hierarchy in which descending levels in the hierarchy are defined by increasing specificity (see paragraph 6);

partitioning the target dimension based on a selected member of the service level, the partitioned dimension containing a first subset of the members of at least one level of the target dimension lower in the hierarchy than the service level (see paragraph 53 and paragraph 91); and

defining a summary cube containing the members of the service level of the target dimension (see paragraph 22 and paragraph 64).

As to claim 53, Shah et al. teaches the method further comprising defining a detail cube, the detail cube including the partitioned dimension and one or more sub-cubes containing aggregations of the first subset of the members of the lower level from the partitioned dimension (see figure 3A; claim 3; page 5, paragraph 77; and page 6, paragraph 91).

As to claim 54, Shah et al. teaches wherein the detail cube comprises a first sub-cube for page views and a second sub-cube for unique user counts (see figure 2; page 4, paragraph 63; and page 5, paragraph 67).

As to claim 55, Shah et al. teaches the method further comprising combining the sub-cubes to form a virtual cube (see page 1, paragraph 22).

As to claim 56, Shah et al. teaches the method further comprising extracting clickstream information from the summary and detail cubes using an OLAP application (see page 1, paragraphs 5, 7 and 22).

As to claim 57, Shah et al. teaches wherein the partitioned dimension contains the members of the upper level associated with the summary cube in addition to the first subset of the members of the lower level associated with the partitioned dimension (see page 1, paragraph 6).

As to claim 58, Shah et al. teaches wherein the target dimension has two or more of the following levels of Web usage information: network, service, site, domain, directory, and page (see page 6, paragraph 92 and page 7, paragraphs 95 and 96).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 15-17, 25-28, 37, 40-42, 44-47, and 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al. (U.S. publication 2002/0099692) in view of Pitts et al. (U.S. publication 2003/0115194).

As to claim 12, Shah et al. does not teach wherein the general dimension contains at least about 500,000 members.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches wherein the general dimension contains at least about 500,000 members (see page 2, paragraph 15 and page 3, paragraph 43).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include wherein the general dimension contains at least about 500,000 members.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because wherein the general dimension contains at least about 500,000 members, would enable the data structure to reduce processing time for large databases.

As to claim 15, Shah et al. does not teach wherein the upper level associated with the summary cube comprises the service level and wherein the selected member represents a selected Web service.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches wherein the upper level associated with the summary cube comprises the service level and wherein the selected member represents a selected Web service (see page 4, paragraph 46).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include wherein the upper level associated with the summary cube comprises the service level and wherein the selected member represents a selected Web service.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because wherein the upper level associated with the summary cube comprises the service level and wherein the selected member represents a selected Web service, would enable the user to drill down to specific information without being forced to process the entire collection of records.

As to claim 16, Shah et al. as modified teaches wherein the partitioned dimension contains data representing directory information for the selected Web service (see Pitts et al., page 3, paragraph 40 and page 4, paragraph 46).

As to claim 17, Shah et al. as modified teaches wherein the partitioned dimension contains data representing page view information for the selected Web service (see Pitts et al., page 3, paragraph 39 and page 4, paragraph 46).

As to claim 25, Shah et al. does not teach the method further comprising implementing a workflow with an XML template to automatically create another partitioned dimension and another detail cube database, the other partitioned dimension containing a second subset of the members of the lower level of the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the other detail cube including the other partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the other partitioned dimension.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches the method further comprising implementing a workflow with an XML template to automatically create another partitioned dimension and another detail cube database, the other partitioned dimension containing a second subset of the members of the lower level of the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the other detail cube including the other partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the other partitioned dimension (see figure 3, 4, and 5 and page 3, paragraph 39).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include the method further comprising implementing a workflow with an XML template to

automatically create another partitioned dimension and another detail cube database, the other partitioned dimension containing a second subset of the members of the lower level of the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the other detail cube including the other partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the other partitioned dimension.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because the method further comprising implementing a workflow with an XML template to automatically create another partitioned dimension and another detail cube database, the other partitioned dimension containing a second subset of the members of the lower level of the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the other detail cube including the other partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the other partitioned dimension, would enable the method to duplicate the information stored in the cube and put it in a database that is going to be use by the server that create the dimension.

As to claim 26, Shah et al. as modified teaches wherein implementing a workflow with an XML template includes defining the other partitioned dimension based on a.

user-specified partition key and defining the other detail cube based on the user-specified partition key (see Pitts et al., page 3, paragraph 40).

As to claim 27, Shah et al. as modified teaches wherein the partition key is representative of the other selected member of the upper level (see Pitts et al., page 3, paragraph 40).

As to claim 28, Shah et al. as modified teaches wherein implementing a workflow with an XML template includes creating an XML metadata file for storing information to define the other partitioned dimension and the other detail cube, and further comprising reading the XML metadata file and deploying OLAP objects for creating the other partitioned dimension and the other detail cube using a COM-based application (see Pitts et al., page 3, paragraph 41).

As to claim 37, Shah et al. does not teach wherein the dimension to be partitioned contains at least about 500,000 members.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches wherein the dimension to be partitioned contains at least about 500,000 members (see page 2, paragraph 15 and page 3, paragraph 43).

Therefore, it would have been obvious to a person having ordinary

skill in the art at the time the invention was made to have modified Shah et al., to include wherein the dimension to be partitioned contains at least about 500,000 members.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because wherein the dimension to be partitioned contains at least about 500,000 members, would enable the data structure to reduce processing time for large databases.

As to claim 40, Shah et al. does not teach wherein the upper level associated with the summary cube comprises the service level and wherein the selected member represents a selected Web service.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches wherein the upper level associated with the summary cube comprises the service level and wherein the selected member represents a selected Web service (see page 4, paragraph 46).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include wherein the upper level associated with the summary cube comprises the service level and wherein the selected member represents a selected Web service.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because wherein the upper level associated with the summary cube comprises

the service level and wherein the selected member represents a selected Web service, would enable the user to drill down to specific information without being forced to process the entire collection of records.

As to claim 41, Shah et al. as modified teaches wherein the partitioned dimension contains data representing directory information for the selected Web service (see Pitts et al., page 3, paragraph 40 and page 4, paragraph 46).

As to claim 42, Shah et al. as modified teaches wherein the partitioned dimension contains data representing page view information for the selected Web service (see Pitts et al., page 3, paragraph 39 and page 4, paragraph 46).

As to claim 44, Shah et al. teaches one or more computer-readable media having computer-executable components for processing data, the data being organized in a dimension containing members in a plurality of levels, the levels being organized according to a hierarchy in which descending levels in the hierarchy are defined by increasing specificity (see figure 11; page 1, paragraph 6; and page 7, paragraph 96), the components comprising:

a summary cube database component storing the members of an upper level of the dimension (see paragraph 22 and paragraph 64);

a first partitioned dimension component containing a first subset of the members of at least one lower level of the dimension, the lower level associated with the first

partitioned dimension component being lower in the hierarchy than the upper level associated with the summary cube database component (see paragraph 64), the first subset of the members of the lower level being partitioned from the dimension based on a selected member of the upper level (see paragraph 53 and paragraph 91); and

a first detail cube database component including the first partitioned dimension component and one or more sub-cubes containing aggregations of the first subset of the members of the lower level from the first partitioned dimension component (see figure 3A; claim 3; page 5, paragraph 77; and page 6, paragraph 91).

Shah et al. does not teach a template component for implementing a workflow to automatically create a second partitioned dimension component and a second detail cube database component, the second partitioned dimension component containing a second subset of the members of the lower level of the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the second detail cube database component including the second partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the second partitioned dimension component.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches a template component for implementing a workflow to automatically create a second partitioned dimension component and a second detail cube database component, the second partitioned dimension component containing a second subset of the members of the lower level of

the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the second detail cube database component including the second partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the second partitioned dimension component (see figure 3, 4, and 5 and paragraphs 9 and 39).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include a template component for implementing a workflow to automatically create a second partitioned dimension component and a second detail cube database component, the second partitioned dimension component containing a second subset of the members of the lower level of the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the second detail cube database component including the second partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the second partitioned dimension component.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because a template component for implementing a workflow to automatically create a second partitioned dimension component and a second detail cube database component, the second partitioned dimension component containing a second subset of

the members of the lower level of the dimension, the second subset of the members of the lower level being partitioned from the dimension based on another selected member of the upper level, the second detail cube database component including the second partitioned dimension component and one or more sub-cubes containing aggregations of the second subset of the members of the lower level from the second partitioned dimension component, would enable the method to duplicate the information stored in the cube and put it in a database that is going to be use by the server that create the dimension.

As to claim 45, Shah et al. as modified teaches wherein the template component includes a partition template for defining the second partitioned dimension component based on a user specified partition key and a cube template for defining the second detail cube database component based on the user-specified partition key (see Pitts et al., figure 3, 4, and 5 and page 3, paragraph 39).

As to claim 46, Shah et al. as modified teaches wherein the partition key is representative of the other selected member of the upper level (see Pitts et al., page 3, paragraph 40).

As to claim 47, Shah et al. as modified teaches wherein the workflow implemented by the template component creates a metadata file storing information for use in defining the second partitioned dimension component and the second detail cube

database component, and further comprising a COM-based application for reading the metadata file and deploying OLAP objects for creating the second partitioned dimension component and the second detail cube database component (see Pitts et al., page 3, paragraph 41).

As to claim 59, Shah et al. does not teach wherein the partitioned dimension contains data representing directory information for the Web service represented by the selected member of the service level.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches wherein the partitioned dimension contains data representing directory information for the Web service represented by the selected member of the service level. (see page 4, paragraph 46).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include wherein the partitioned dimension contains data representing directory information for the Web service represented by the selected member of the service level.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because wherein the partitioned dimension contains data representing directory information for the Web service represented by the selected member of the service level, would enable the user to drill down to specific information without being forced to process the entire collection of records.

As to claim 60, Shah et al. does not teach wherein the partitioned dimension contains data representing page view information for the Web service represented by the selected member of the service level.

Pitts et al. teaches a method and apparatus for processing a query to a multi-dimensional data structure (see abstract), in which he teaches wherein the partitioned dimension contains data representing page view information for the Web service represented by the selected member of the service level (see page 3, paragraph 39 and page 4, paragraph 46).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include wherein the partitioned dimension contains data representing page view information for the Web service represented by the selected member of the service level.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Pitts et al., because wherein the partitioned dimension contains data representing page view information for the Web service represented by the selected member of the service level, would enable the user to drill down to specific information without being forced to process the entire collection of records.

6. Claims 33 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al. (U.S. publication 2002/0099692) in view of Wong et al. (U.S. patent 6,708,172).

As to claim 33, Shah et al. does not teach wherein implementing zoom in/zoom out events comprises configuring an XML metadata file to identify zoom in/zoom out events behavior.

Wong et al. teaches a community-based shared multiple browser environment (see abstract), in which he teaches wherein implementing zoom in/zoom out events comprises configuring an XML metadata file to identify zoom in/zoom out events behavior (see column 16, lines 45-55).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include wherein implementing zoom in/zoom out events comprises configuring an XML metadata file to identify zoom in/zoom out events behavior.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Wong et al., because wherein implementing zoom in/zoom out events comprises configuring an XML metadata file to identify zoom in/zoom out events behavior, would enable the method to navigate into the digital map from overview to detail and detail to overview, because XML preserve the selection and filters with the same dimensionality.

As to claim 51, Shah et al. does not teach wherein the navigation component comprises a metadata file configured to identify zoom in/zoom out events behavior.

Wong et al. teaches a community-based shared multiple browser environment (see abstract), in which he teaches wherein the navigation component comprises a

metadata file configured to identify zoom in/zoom out events behavior (see column 16, lines 45-55).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al., to include wherein the navigation component comprises a metadata file configured to identify zoom in/zoom out events behavior.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Shah et al. by the teaching of Wong et al., because wherein the navigation component comprises a metadata file configured to identify zoom in/zoom out events behavior, would enable the method to navigate into the digital map from overview to detail and detail to overview, because XML preserve the selection and filters with the same dimensionality.

Response to Arguments

7. Applicant's arguments filed 5-August-2004 with respect to the rejected claims in view of the cited references have been fully considered but they are not found persuasive:

In response to applicants' arguments that "Shah et al. reference fails to disclose partitioning of one or more dimension to improve the processing of large dimensions and user navigation experience and fail to disclose or teach a summary cube", the arguments have been fully considered but are not deemed persuasive, because Shah et al. teaches "The database 110 is accessible by the analytical server engine 120. The analytical

server engine 120 accepts requests for metric calculations from clients 135, uses the metadata structures 145 to identify the necessary fact components and the best star schema for accessing them, generates and executes structured queries in a database query language, such as Structured Query Language (SQL), performs outer joins to conform query results, calculates the desired metrics, and returns them to the clients in a structured form such as multidimensional cubes”, (see Shah et al., paragraph 22).

In response to applicants’ arguments that “Shah et al. reference fails to disclose partitioning of a dimension based on a selected member of a particular level of the dimension as set forth in the claims”, the arguments have been fully considered but are not deemed persuasive, because Shah et al. teaches a multidimensional cubes (see Shah et al., paragraph 22) where is inherent because a cube is three-dimensional that mean that have partitions and different levels.

In response to applicants’ arguments that “Shah et al. reference fails to teach that the levels of the target dimension include a service level containing members representative of a plurality of web services”, the arguments have been fully considered but are not deemed persuasive, because Shah et al. teaches “Further, the set of instructions can be stored in the memory of another computer and transmitted over a local area network or a wide area network, such as the Internet, when desired by the user”, (see Shah et al., paragraph 96).

In response to applicants' arguments that "Neither reference suggest the applicability of Wong et al. to a database system", the arguments have been fully considered but are not deemed persuasive, because Wong et al. teaches a clear database, (see Wong et al., figures 6B and 6c).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Belix M. Ortiz whose telephone number is 571-272-4081. The examiner can normally be reached on Monday-Friday 9am-5pm.

Art Unit: 2164

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4083. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

bmo

December 1, 2004



SAM RIMELL
PRIMARY EXAMINER